

Daily GLOWBUGS

Digest: V1 #116

via AB4EL Web Digests @ SunSITE

Purpose: building and operating vacuum tube-based QRP rigs

[AB4EL Ham Radio Homepage @ SunSITE](#)

%%%% GlowBugs %%%%% GlowBugs %%%%% GlowBugs %%%%% GlowBugs %%%%%

Subject: glowbugs V1 #116

glowbugs

Saturday, September 20 1997

Volume 01 : Number 116

Date: Fri, 19 Sep 1997 19:20:06 -0400

From: benb27@juno.com (Ben C Bradley)

Subject: Ferrite vs. powdered iron/Re: Quick toroid question

I saw this last week, and I have to ask - what's the difference between ferrite and powdered iron?

I do know (I think) that 'powdered iron', embedded in some kind of glue or plastic, is made so as to make magnetic material that is non-conductive, and so doesn't have the eddy currents a solid piece of regular iron would, thus having less loss. I always thought ferrite was just a name for this, or perhaps a brand name. What actually is ferrite, how is it different, and what is it made of?

At 01:38 PM 9/12/97 +1000, Murray Kelly wrote:

>

>

>kmlh @ juno.com wrote:

>

{snip}

>> The toroid should

>> be spaced at least its own height above an aluminum chassis, double that

>> for steel. Altho a toroid is fairly self shielding it will be affected by

>> large amounts of metal in close proximity.

>

>This is generous even for solenoids, according to antenna tuner mfg-ers.

>

>Ferrite seems best for transformers (baluns etc) and powder for resonant coils?

>

>> One other thing, in a TX ATU it would not be advisable to use ferrite

>> material. Powdered iron with a mu of 10 (2 Mix) or a mu of 8 (6 Mix)
>> is preferred at HF.
>

Ben Bradley benb27@juno.com

Date: Fri, 19 Sep 1997 17:07:43 -0700 (MST)
From: Chris Trask <ctrask@primenet.com>
Subject: Re: Ferrite vs. powdered iron/Re: Quick toroid question

On Fri, 19 Sep 1997, Ben C Bradley wrote:

> I saw this last week, and I have to ask - what's the difference
> between ferrite and powdered iron?
> I do know (I think) that 'powdered iron', embedded in some kind
> of glue or plastic, is made so as to make magnetic material that is
> non-conductive, and so doesn't have the eddy currents a solid piece
> of regular iron would, thus having less loss. I always thought
> ferrite was just a name for this, or perhaps a brand name. What
> actually is ferrite, how is it different, and what is it made of?
>

I'm glad you asked that question.

Powdered iron is, just as the name implies and as you have said,
iron ground to a powder form and held together with a binder of some sort.

Ferrite, on the other hand, is also a powder, but, as stated in
the Philips Soft Ferrites data book:

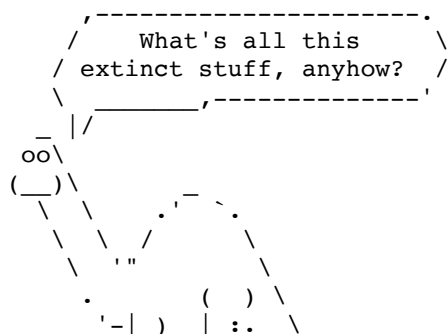
"Ferrites are dark grey or black ceramic materials. They are
very hard, brittle, and chemically inert. Most modern magnetically soft
ferrites have a cubic (spinel) structure.

"The general composition of such ferrites is MeFe_2O_4 , where Me
represents one of several of the divalent transition metals such as
Magnesium (Mn), Zinc (Zn), Nickel (Ni), Cobalt (Co), Copper (Cu), Iron
(Fe), or Magnesium (Mg)."

Regards,

Chris

What's all this
extinct stuff, anyhow?



Circuit Design for the
RF Impaired

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Technical Editor,
QRP Quarterly
QRP ARCI 9464

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c__ ; c__ ; '-..'>.__ Email: ctrask@primenet.com

Graphics by Loek Frederiks

Date: Fri, 19 Sep 1997 21:14:07 -0500 (CDT)
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: [none]

Anyone have the specs on a tube type CK534AX ? These are by Raytheon.

E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI
CIS: Data / Telecom Aurora University, Aurora, IL
630-844-4898 Fax 630-844-5530

Date: Fri, 19 Sep 1997 21:18:58 -0700 (PDT)
From: John Kolb <jlkolb@cts.com>
Subject: Re: Ferrite vs. powdered iron/Re: Quick toroid question

On Fri, 19 Sep 1997, Ben C Bradley wrote:

> I saw this last week, and I have to ask - what's the difference
> between ferrite and powdered iron?
> I do know (I think) that 'powdered iron', embedded in some kind
> of glue or plastic, is made so as to make magnetic material that is

Ferrites are generally alloys of other materials, not iron. Manganese-zinc or nickel-zinc. They generally have higher permeabilities (more inductance) than powdered iron but much less stable with temperature.

BTW, I have a number of excess T37-2 and T50-2 powdered iron cores, normally recommended for use at 2 - 10 MHz.

John Kolb KK6IL jlkolb@cts.com

Date: Sat, 20 Sep 1997 10:55:23 -0400 (EDT)
From: leeboo@ct.net (Leon Wiltsey)
Subject: cap "poof" much sadness

Hi Gang

While using my trusty hw16 last night I got a crash and then smoke, as one of the filters went south. It is a 4 section 40 -50-80-80 at 350v the main filter for the rec section. If anybody has a junker hw-16 and can send me the main filter cap,would certainly appreciate it. Will pay any reasonable costs. This is my main station equipment, so am out of business now.

THANK THE LORD FOR ALL YOU HAVE

68 yr old semidisabled senior
(stroke got my balance & hand to eye coordination)
ham agn as KF4RCL TECK+ (MUCH HAPPINESS)
BUILD MOST STATION EQUIP
SUB.BA & GB-- NO SOLID STATE

LEON B WILTSEY (Lee) tel. 941 471 3739
4600 Lake Haven BLVD.
Sebring, Fl. 33872 (SEBRING) WHERE THERE IS NO QRM FROM THE LOCALS

Date: Sat, 20 Sep 1997 09:27:56 -0500 (CDT)
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: tube help again

Another tube, which I have many of but can't find the specs for is
a 6AM6 made by Mullard. Any help appreciated.

E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI
CIS: Data / Telecom Aurora University, Aurora, IL
630-844-4898 Fax 630-844-5530

Date: Sat, 20 Sep 1997 13:46:55 +0100
From: BOB DUCKWORTH <bob@atl.org>
Subject: test3

test3

Date: Sat, 20 Sep 1997 23:35:58 +0000
From: Sandy W5TVW <ebjr@worldnet.att.net>
Subject: FS: SX-71

My Hallicrafters SX-71 is on the block. Cosmetically around an "8".
Working good electrically. Oscillation problem licked, all original knobs,
etc. Sell for \$125 plus shipping/packing. I have another goodie I
found I need the cash for!

73,

E. V. Sandy Blaize, W5TVW

"Boat Anchors collected, restored, repaired, traded and used!"

417 Ridgewood Drive

Metairie, LA., 70001

End of glowbugs V1 #116

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Created by **Steve Modena, AB4EL**
Comments and suggestions to **modena@SunSITE.unc.edu**
